UNITED STATES PATENT AND TRADEMARK OFFICE

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/712,445	KARNS, SAMUEL L.
	Examiner	Art Unit	
	ERIC YEN	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>12 February 2009</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-20</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-20</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail. Date. _____

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   In response to the Office Action mailed 11/12/09, applicant has submitted an

amendment filed 2/12/09.

Claims 1, 3-5, 10, 12-14, and 19, have been amended.

Response to Arguments

1.   Applicant's arguments with respect to claims 1, 10, and 19, have been

considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

1.   **Claims 1, 4-6, 10, 13-15 and 19** are rejected under 35 U.S.C. 103(a) as being

unpatentable over ESQUERRA et al. ("Design of a Phonetic Corpus for Speech

Recognition in Catalan"), in view of Applicant's Admitted Prior Art, hereafter AAPA, and

Kanevsky et al. (US 6,009,392), hereafter Kanevsky.

2.   Regarding **claim 1**, ESQUERRA teaches a method for developing a script

("corpus of sentences", section 3.1) to be used with speech recognition systems ("for

speech recognition", abstract), said method comprising the steps of:

reading language phoneme data ("reference corpus", section 2) for a given language,

the language phoneme data having a plurality of phonemes occurring in the given

language ("corpus was converted into phonemes using a transcription program", section

2.1);

        reading script data ("sentences between 10 and 40 letters were selected",

section 3.1) having a set of one or more phonemes ("N is the number of phones in a

sentence", section 3.1; "text-to-phoneme", Section 2.1; see Response to Arguments);

        counting each phoneme in the script data to produce a count data for each of the

plurality of phonemes in the language phoneme data ("units were counted to know

whether they reach the minimum number of required repetitions", section 3.1, "text-to-

phoneme", Section 2.1; where "units" refer to phonemes);

generating a set of statistical data ("coverage measures", section 4, paragraph 5)

derived from the count data, the set of statistical data including one or more metrics of

the extent to which the phonemes in the language phoneme data are included in the

script data (see Table 3, BD3-E is the corpus of sentences used for training, REF is the

reference corpus).

        Esquerra fails to teach a script is something that is read aloud by the end user as

an example of a particular users' voice signature and speaking style.

AAPA teaches a script is something that is read aloud by the end user as an example of a particular users' voice signature and speaking style (Specification, paragraph 3).

Therefore, it would have been obvious to one of ordinary skill in the art a the time of invention to modify Esquerra to include the teaching of AAPA of a script is something that is read aloud by the end user as an example of a particular users' voice signature and speaking style, in order to improve recognition performance, as described by Newman et al. (US 6,151,575), hereafter Newman (col. 1, lines 50-65; "classify different phonemes... supervised... having the speaker read from a script", col. 8, lines 24-45)

ESQUERRA, in view of AAPA and Kanevsky, fail to teach the language phoneme data comprising an exhaustive list of phonemes and wherein the count data comprises a total number of appearances in the script data of a phoneme from the exhaustive list.

Kanevsky suggests the language phoneme data comprising an exhaustive list of phonemes and wherein the count data comprises a total number of appearances in the script data of a phoneme from the exhaustive list ("the probability distribution of a .... Phoneme... total number of... number of times the... phoneme appears in a textual corpus...phonemes in the corpus", col. 7, lines 40-61; "alphabetized list of many words", col. 4, lines 19-31; where the corpus is script data and the number of times it appears is a total number, and it is used in speech recognition by generating a probability distribution [statistical data], and in the context of speech recognition, it is obvious to

have an exhaustive list/set of phonemes in order to reduce the likelihood that the

recognizer will not be able to understand input speech)

Therefore, it would have been obvious to one of ordinary skill in the art at the

time of invention to modify ESQUERRA, in view of AAPA and Kanevsky, to include the

teaching of Kanevsky of the language phoneme data comprising an exhaustive list of

phonemes and wherein the count data comprises a total number of appearances in the

script data of a phoneme from the exhaustive list, in order to provide the data needed to

perform proper analysis and classification in speech recognition, as described by

Kanevsky (col. 7, lines 48-50)

3.   Regarding **claim 4**, ESQUERRA further teaches that the set of statistical data
includes:

an occurrence data for each of the phonemes in the phoneme data, each

occurrence data indicating a number of occurrences of the phoneme in the script data

("units were counted to know whether they reach the minimum number of required

repetitions", section 3.1, paragraph 1, where "units" refer to phonemes).

4.   Regarding **claim 5**, ESQUERRA further teaches that the set of statistical data
includes:

a ratio data, each ratio data being the number of phonemes in the script data as

a percentage of the number of the plurality of phonemes in the phoneme data (see

Table 3, BD3-E is the corpus of sentences used for training, REF is the reference

corpus).

5.   Regarding **claim 6**, ESQUERRA further teaches that the set of statistical data

includes:

        a missing phoneme data, each missing phoneme data being a list of the

phonemes in the language phoneme data not included in the script data (see section

3.1, paragraph 2, new sentences are created containing missing allophones, so a list of

the missing allophones is inherent).

6.   Regarding **claim 10**, ESQUERRA teaches a machine readable storage having

stored thereon a computer program for developing a script ("corpus of sentences",

section 3.1, paragraph 1; "Internet", Section 2; See Response to Arguments) to be used

with speech recognition systems ("for speech recognition", abstract), said computer

program comprising a routine set of instructions for causing the machine to perform the

steps of:

        reading language phoneme data ("reference corpus", section 2) for a given

language, the language phoneme data having a plurality of phonemes occurring in the

given language ("corpus was converted into phonemes using a transcription program",

section 2.);

reading script data ("sentences between 10 and 40 letters were selected",

section 3.1; "text-to-phoneme", Section 2.1) having a set of one or more phonemes ("N

is the number of phones in a sentence", section 3.1);

counting each phoneme in the script data to produce a count data for each of the

plurality of phonemes in the language phoneme data ("units were counted to know

whether they reach the minimum number of required repetitions", section 3.1; "text-to-

phoneme", Section 2.1, Table 1; where "units" refer to phonemes);

generating a set of statistical data ("coverage measures", section 4, paragraph 5)

derived from the count data, the set of statistical data including one or more metrics of

the extent to which the phonemes in the language phoneme data are included in the

script data (see Table 3, BD3-E is the corpus of sentences used for training, REF is the

reference corpus).

Esquerra fails to teach a script is something that is read aloud by the end user as

an example of a particular users' voice signature and speaking style.

AAPA teaches a script is something that is read aloud by the end user as an

example of a particular users' voice signature and speaking style (Specification,

paragraph 3).

Therefore, it would have been obvious to one of ordinary skill in the art a the time

of invention to modify Esquerra to include the teaching of AAPA of a script is something

that is read aloud by the end user as an example of a particular users' voice signature

and speaking style, in order to improve recognition performance, as described by

Newman et al. (US 6,151,575), hereafter Newman (col. 1, lines 50-65; "classify different

phonemes... supervised... having the speaker read from a script", col. 8, lines 24-45)

7.   Regarding **claim 13**, ESQUERRA further teaches that the set of statistical data

includes:

an occurrence data for each of the phonemes in the phoneme data, each

occurrence data indicating a number of occurrences of the phoneme in the script data

("units were counted to know whether they reach the minimum number of required

repetitions", section 3.1, paragraph 1, where "units" refer to phonemes).

8.   Regarding **claim 14**, ESQUERRA further teaches that the set of statistical data

includes:

a ratio data, each ratio data being the number of phonemes in the script data as

a percentage of the number of the plurality of phonemes in the phoneme data (see

Table 3, BD3-E is the corpus of sentences used for training, REF is the reference

corpus).

9.   Regarding **claim 15**, ESQUERRA further teaches that the set of statistical data

includes:

a missing phoneme data, each missing phoneme data being a list of the

phonemes in the language phoneme data not included in the script data (see section

3.1, paragraph 2, new sentences are created containing missing allophones, so a list of

the missing allophones is inherent).

10.   Regarding **claim 19**, ESQUERRA teaches a script development tool ("design of

a corpus for speech recognition", abstract) configured for coupling to a script ("corpus of

sentences", section 3.1) having a set of one or more phonemes ("N is the number of

phones in a sentence", section 3.1; "text-to-phoneme", Section 2.1) and programmed to

both count each phoneme in said script to produce count data for each phoneme in a

selected language ("units were counted to know whether they reach the minimum

number of required repetitions", section 3.1, Table 1; "text-to-phoneme", Section 2.1;

where "units" refer to phonemes), and also to generate a set of statistical data

("coverage measures", section 4, paragraph 5) derived from said count data, the set of

statistical data comprising one or more metrics of the extent to which each phoneme in

said selected language is included in said script (see Table 3, BD3-E is the corpus of

sentences used for training, REF is the reference corpus).

Esquerra fails to teach a script is something that is read aloud by the end user as

an example of a particular users' voice signature and speaking style.

AAPA teaches a script is something that is read aloud by the end user as an

example of a particular users' voice signature and speaking style (Specification,

paragraph 3).

Therefore, it would have been obvious to one of ordinary skill in the art a the time

of invention to modify Esquerra to include the teaching of AAPA of a script is something

that is read aloud by the end user as an example of a particular users' voice signature
and speaking style, in order to improve recognition performance, as described by
Newman et al. (US 6,151,575), hereafter Newman (col. 1, lines 50-65; "classify different
phonemes... supervised... having the speaker read from a script", col. 8, lines 24-45)

      ESQUERRA, in view of AAPA and Kanevsky, fail to teach the language
phoneme data comprising an exhaustive list of phonemes and wherein the count data
comprises a total number of appearances in the script data of a phoneme from the
exhaustive list.

      Kanevsky suggests the language phoneme data comprising an exhaustive list of
phonemes and wherein the count data comprises a total number of appearances in the
script data of a phoneme from the exhaustive list ("the probability distribution of a ....
Phoneme... total number of... number of times the... phoneme appears in a textual
corpus...phonemes in the corpus", col. 7, lines 40-61; "alphabetized list of many words",
col. 4, lines 19-31; where the corpus is script data and the number of times it appears is
a total number, and it is used in speech recognition by generating a probability
distribution [statistical data], and in the context of speech recognition, it is obvious to
have an exhaustive list/set of phonemes in order to reduce the likelihood that the
recognizer will not be able to understand input speech)

      Therefore, it would have been obvious to one of ordinary skill in the art at the
time of invention to modify ESQUERRA, in view of AAPA and Kanevsky, to include the
teaching of Kanevsky of the language phoneme data comprising an exhaustive list of
phonemes and wherein the count data comprises a total number of appearances in the

script data of a phoneme from the exhaustive list, in order to provide the data needed to

perform proper analysis and classification in speech recognition, as described by

Kanevsky (col. 7, lines 48-50)

11.   **Claims 2, 3, 7, 8, 11, 12, 16, 17, and 20** are rejected under 35 U.S.C. 103(a) as

being unpatentable over ESQUERRA et al. ("Design of a Phonetic Corpus for Speech

Recognition in Catalan") in view of AAPA, Kanevsky and GOULD (Patent No.: US

5,794,189).

12.   Regarding **claim 2**, ESQUERRA teaches that the script data ("corpus of

sentences", section 3.1, paragraph 1) includes one or more words ("sentences between

10 and 40 letters were selected", section 3.1, paragraph 1), each word having one or

more of the set of one or more phonemes ("N is the number of phones in a sentence",

section 3.1, paragraph 1).

        However, ESQUERRA, in view of AAPA and Kanevsky, does not disclose

reading vocabulary data, comparing words to vocabulary data, or returning an error

message.

        In the same field of speech recognition, GOULD teaches:

    reading vocabulary data having one or more words ("dictionary", column 15, line 15);

        comparing each word in the script data with the vocabulary data ("for each word

in the buffer, look the word up in the dictionary", column 15, lines 14-15); and

returning an error message if a word in the script data is not included in the vocabulary data ("if the word is not in the dictionary… display an 'unknown word' error to the user", column 15, lines 16-20).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to check the words in the corpus of sentences provided by ESQUERRA, in view of AAPA and Kanevsky, in the manner of GOULD in order to ensure that a speech model can be obtained for each word (see GOULD, column 15, lines 14-20).

Regarding **claim 3**, ESQUERRA teaches counting each phoneme in each word in the script data ("units were counted to know whether they reach the minimum number of required repetitions", section 3.1, paragraph 1, where "units" refer to phonemes).

However, ESQUERRA, in view of AAPA and Kanevsky, does not disclose comparing words to vocabulary data, returning an error message, or counting the phonemes if the word is in the vocabulary data.

In the same field of speech recognition, ESQUERRA in view of GOULD teach:

comparing each word in the script data with the vocabulary data ("for each word in the buffer, look the word up in the dictionary", GOULD, column 15, lines 14-15);

returning an error message if a word in the script data is not included in the vocabulary data ("if the word is not in the dictionary… display an 'unknown word' error to the user", GOULD, column 15, lines 16-20); and

counting each phoneme in each word in the script data ("units were counted to know whether they reach the minimum number of required repetitions", ESQUERRA, section 3.1, paragraph 1) if a word in the script data is included in the vocabulary data ("remember these words as target words", column 15, line 21, where a word marked as a target word has further operations performed on it).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to check the words in the corpus of sentences provided by ESQUERRA, in view of AAPA and Kanevsky, in the manner of GOULD in order to ensure that a speech model can be obtained for each word (see GOULD, column 15, lines 14-20).

13.   Regarding **claim 7**, ESQUERRA teaches that the script data ("corpus of sentences", section 3.1, paragraph 1) includes one or more words ("sentences between 10 and 40 letters were selected", section 3.1, paragraph 1), and further comprising the steps of:

reading an additional word having one or more phonemes ("new sentences had to be written containing those allophones", section 3.1, paragraph 2); and

adding an additional word to the script data ("new sentences were added to the corpus", section 3.1, paragraph 4).

However ESQUERRA, in view of AAPA and Kanevsky, does not disclose reading a vocabulary data, comparing the additional word to the vocabulary data, or adding the additional word if the additional word is included in the vocabulary data.

In the same field of speech recognition, ESQUERRA in view of GOULD teach:

reading a vocabulary data having one or more words ("dictionary", GOULD, column 15, line 15);

comparing the additional word with the vocabulary data ("for each word in the buffer, look the word up in the dictionary", GOULD, column 15, lines 14-15);

adding the additional word to the script data ("new sentences were added to the corpus", section 3.1, paragraph 4) if the additional word is included in the vocabulary data ("remember these words as target words", column 15, line 21, where a word marked as a target word has further operations performed on it).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to check the words in the new sentence provided by ESQUERRA, in view of AAPA and Kanevsky, in the manner of GOULD in order to ensure that a speech model can be obtained for each word (see GOULD, column 15, lines 14-20).

14.   Regarding **claim 8**, ESQUERRA teaches that the script data ("corpus of sentences", section 3.1, paragraph 1) includes one or more words ("sentences between 10 and 40 letters were selected", section 3.1, paragraph 1), and further comprising the step of:

reading an additional word having one or more phonemes ("new sentences had to be written containing those allophones", section 3.1, paragraph 2);

However ESQUERRA, in view of AAPA and Kanevsky, does not disclose reading a vocabulary data, comparing the additional word with the script data, or removing the additional word from the script data.

In the same field of speech recognition, GOULD teaches:

reading a vocabulary data having one or more words ("dictionary", column 15, line 15);

comparing the additional word with the script data ("if the text on the screen starting with the current word matches the indicated words, set the selection to text on the screen just compared against", column 13, lines 35-38, where "text on the screen" is the additional word, and the "indicated words" is the script data);

removing the additional word from the script data if the additional word is included in the script data ("if words are selected on the screen, delete the words which are selected", column 13, lines 48-49, where the word "selected on the screen" is the additional word that was compared with the script data).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to delete the words in the new sentence provided by ESQUERRA, in view of AAPA and Kanevsky, in the manner of GOULD in order to filter out words which may be problematic for training (see PITRELLI et al., section 2.1, listed on form PTO-892).

15.   Regarding **claim 11**, ESQUERRA teaches that the script data ("corpus of sentences", section 3.1, paragraph 1) includes one or more words ("sentences between

10 and 40 letters were selected", section 3.1, paragraph 1), each word having one or more of the set of one or more phonemes ("N is the number of phones in a sentence", section 3.1, paragraph 1).

ESQUERRA, in view of AAPA and Kanevsky, fail to teach the language phoneme data comprising an exhaustive list of phonemes and wherein the count data comprises a total number of appearances in the script data of a phoneme from the exhaustive list.

Kanevsky suggests the language phoneme data comprising an exhaustive list of phonemes and wherein the count data comprises a total number of appearances in the script data of a phoneme from the exhaustive list ("the probability distribution of a …. Phoneme… total number of… number of times the… phoneme appears in a textual corpus…phonemes in the corpus", col. 7, lines 40-61; "alphabetized list of many words", col. 4, lines 19-31; where the corpus is script data and the number of times it appears is a total number, and it is used in speech recognition by generating a probability distribution [statistical data], and in the context of speech recognition, it is obvious to have an exhaustive list/set of phonemes in order to reduce the likelihood that the recognizer will not be able to understand input speech)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify ESQUERRA, in view of AAPA and Kanevsky, to include the teaching of Kanevsky of the language phoneme data comprising an exhaustive list of phonemes and wherein the count data comprises a total number of appearances in the script data of a phoneme from the exhaustive list, in order to provide the data needed to

perform proper analysis and classification in speech recognition, as described by
Kanevsky (col. 7, lines 48-50)

However, ESQUERRA, in view of AAPA and Kanevsky, does not disclose
reading vocabulary data, comparing words to vocabulary data, or returning an error
message.

In the same field of speech recognition, GOULD teaches:

reading vocabulary data having one or more words ("dictionary", column 15, line 15);

comparing each word in the script data with the vocabulary data ("for each word
in the buffer, look the word up in the dictionary", column 15, lines 14-15); and

returning an error message if a word in the script data is not included in the
vocabulary data ("if the word is not in the dictionary... display an 'unknown word' error
to the user", column 15, lines 16-20).

Therefore, it would have been obvious to a person of ordinary skill in the art at
the time the invention was made to check the words in the corpus of sentences
provided by ESQUERRA, in view of AAPA and Kanevsky, in the manner of GOULD in
order to ensure that a speech model can be obtained for each word (see GOULD,
column 15, lines 14-20).

Regarding **claim 12**, ESQUERRA teaches counting each phoneme in each word
in the script data ("units were counted to know whether they reach the minimum number
of required repetitions", section 3.1, paragraph 1, where "units" refer to phonemes).

However, ESQUERRA, in view of AAPA and Kanevsky, does not disclose comparing words to vocabulary data, returning an error message, or counting the phonemes if the word is in the vocabulary data.

In the same field of speech recognition, ESQUERRA in view of GOULD teach:

comparing each word in the script data with the vocabulary data ("for each word in the buffer, look the word up in the dictionary", GOULD, column 15, lines 14-15);

returning an error message if a word in the script data is not included in the vocabulary data ("if the word is not in the dictionary... display an 'unknown word' error to the user", GOULD, column 15, lines 16-20); and

counting each phoneme in each word in the script data ("units were counted to know whether they reach the minimum number of required repetitions", ESQUERRA, section 3.1, paragraph 1) if a word in the script data is included in the vocabulary data ("remember these words as target words", column 15, line 21, where a word marked as a target word has further operations performed on it).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to check the words in the corpus of sentences provided by ESQUERRA, in view of AAPA and Kanevsky, in the manner of GOULD in order to ensure that a speech model can be obtained for each word (see GOULD, column 15, lines 14-20).

16.   Regarding **claim 16**, ESQUERRA teaches that the script data ("corpus of sentences", section 3.1, paragraph 1) includes one or more words ("sentences between

10 and 40 letters were selected", section 3.1, paragraph 1), and further comprising the steps of:

reading an additional word having one or more phonemes ("new sentences had to be written containing those allophones", section 3.1, paragraph 2); and

adding an additional word to the script data ("new sentences were added to the corpus", section 3.1, paragraph 4).

However ESQUERRA, in view of AAPA and Kanevsky, does not disclose reading a vocabulary data, comparing the additional word to the vocabulary data, or adding the additional word if the additional word is included in the vocabulary data.

In the same field of speech recognition, ESQUERRA in view of GOULD teach:

reading a vocabulary data having one or more words ("dictionary", GOULD, column 15, line 15);

comparing the additional word with the vocabulary data ("for each word in the buffer, look the word up in the dictionary", GOULD, column 15, lines 14-15);

adding the additional word to the script data ("new sentences were added to the corpus", ESQUERRA, section 3.1, paragraph 4) if the additional word is included in the vocabulary data ("remember these words as target words", column 15, line 21, where a word marked as a target word has further operations performed on it).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to check the words in the new sentence provided by ESQUERRA, in view of AAPA and Kanevsky, in the manner of GOULD in order to

ensure that a speech model can be obtained for each word (see GOULD, column 15,

lines 14-20).

17.   Regarding **claim 17**, ESQUERRA teaches that the script data ("corpus of

sentences", section 3.1, paragraph 1) includes one or more words ("sentences between

10 and 40 letters were selected", section 3.1, paragraph 1), and further comprising the

step of:

        reading an additional word having one or more phonemes ("new sentences had

to be written containing those allophones", section 3.1, paragraph 2);

        However ESQUERRA, in view of AAPA and Kanevsky, does not disclose reading

a vocabulary data, comparing the additional word with the script data, or removing the

additional word from the script data.

        In the same field of speech recognition, GOULD teaches:

    reading a vocabulary data having one or more words ("dictionary", column 15, line

        15);

        comparing the additional word with the script data ("if the text on the screen

starting with the current word matches the indicated words, set the selection to text on

the screen just compared against", column 13, lines 35-38, where "text on the screen" is

the additional word, and the "indicated words" is the script data);

        removing the additional word from the script data if the additional word is

included in the script data ("if words are selected on the screen, delete the words which

are selected", column 13, lines 48-49, where the word "selected on the screen" is the

additional word that was compared with the script data).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to delete the words in the new sentence provided by

ESQUERRA, in view of AAPA and Kanevsky, in the manner of GOULD in order to filter

out words which may be problematic for training (see PITRELLI et al., section 2.1, listed

on form PTO-892).

18.   Regarding **claim 20**, ESQUERRA teaches that the script ("corpus of sentences",

section 3.1, paragraph 1) includes one or more words ("sentences between 10 and 40

letters were selected", section 3.1, paragraph 1), and wherein the tool is further

programmed to read an additional word having one or more phonemes ("new sentences

had to be written containing those allophones", section 3.1, paragraph 2), and add the

additional word to the script data ("new sentences were added to the corpus", section

3.1, paragraph 4).

However ESQUERRA, in view of AAPA and Kanevsky, does not disclose a tool

that is programmed to read a vocabulary data having one or more words, and is also

programmed to compare the additional word with the vocabulary data and add the

additional word to the script data if the additional word is included in the vocabulary

data, and is also programmed to compare the additional word with the script and

remove the additional word from the script data if the additional word is included in the

script data.

In the same field of speech recognition, ESQUERRA in view of GOULD teach a tool that is programmed to read a vocabulary data having one or more words ("dictionary", GOULD, column 15, line 15), and is also programmed to compare the additional word with the vocabulary data ("for each word in the buffer, look the word up in the dictionary", GOULD, column 15, lines 14-15) and add the additional word to the script data ("new sentences were added to the corpus", ESQUERRA, section 3.1, paragraph 4) if the additional word is included in the vocabulary data ("remember these words as target words", column 15, line 21, where a word marked as a target word has further operations performed on it), and is also programmed to compare the additional word with the script ("if the text on the screen starting with the current word matches the indicated words, set the selection to text on the screen just compared against", GOULD, column 13, lines 35-38, where "text on the screen" is the additional word, and the "indicated words" is the script data) and remove the additional word from the script data if the additional word is included in the script data ("if words are selected on the screen, delete the words which are selected", GOULD, column 13, lines 48-49, where the word "selected on the screen" is the additional word that was compared with the script data).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to check the words in the new sentence provided by ESQUERRA, in view of AAPA and Kanevsky, in the manner of GOULD in order to ensure that a speech model can be obtained for each word (see GOULD, column 15, lines 14-20) and to filter out words which may be problematic for training (see PITRELLI et al., section 2.1, listed on form PTO-892).

19.   **Claims 9 and 18** are rejected under 35 U.S.C. 103(a) as being unpatentable

over ESQUERRA et al. ("Design of a Phonetic Corpus for Speech Recognition in

Catalan"), in view of AAPA, and further in view of Department of Psychology, University

of Essex ("Phoneme Search"), hereinafter referred to as ESSEX.

20.   Regarding **claim 9**, ESQUERRA teaches that the script data ("corpus of

sentences", section 3.1, paragraph 1) includes one or more words ("sentences between

10 and 40 letters were selected", section 3.1, paragraph 1).

However, ESQUERRA, in view of AAPA and Kanevsky, does not disclose

reading a vocabulary data, reading a set of one or more desired phonemes, searching

the vocabulary data for one or more words having the set of one or more desired

phonemes, or generating a report of one or more additional words having the set of one

or more desired phonemes.

In the same field of phonetic evaluation, ESSEX teaches:

reading a vocabulary data having one or more words ("word database", see

header);

reading a set of one or more desired phonemes (three different phonemes may

be selected with the pull-down menus);

searching the vocabulary data for one or more words having the set of one or

more desired phonemes ("search for words which contain the following phonemes");

generating a report of one or more additional words having the set of one or

more desired phonemes ("generates a list of words"), if the one or more additional

words having the set of one or more desired phonemes are included in the vocabulary

data (see "Phoneme Search Results").

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made use the phoneme search engine of ESSEX with the

corpus design of ESQUERRA, in view of AAPA and Kanevsky, in order to find words

containing "missing units" (ESSEX, section 5, paragraph 1).

21.   Regarding **claim 18**, ESQUERRA teaches that the script data ("corpus of

sentences", section 3.1, paragraph 1) includes one or more words ("sentences between

10 and 40 letters were selected", section 3.1, paragraph 1).

However, ESQUERRA, in view of AAPA and Kanevsky, does not disclose

reading a vocabulary data, reading a set of one or more desired phonemes, searching

the vocabulary data for one or more words having the set of one or more desired

phonemes, or generating a report of one or more additional words having the set of one

or more desired phonemes.

In the same field of phonetic evaluation, ESSEX teaches:

reading a vocabulary data having one or more words ("word database", see

header);

reading a set of one or more desired phonemes (three different phonemes may

be selected with the pull-down menus);

searching the vocabulary data for one or more words having the set of one or more desired phonemes ("search for words which contain the following phonemes");

generating a report of one or more additional words having the set of one or more desired phonemes ("generates a list of words"), if the one or more additional words having the set of one or more desired phonemes are included in the vocabulary data (see "Phoneme Search Results").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made use the phoneme search engine of ESSEX with the corpus design of ESQUERRA, in view of AAPA and Kanevsky, in order to find words containing "missing units" (ESSEX, section 5, paragraph 1).

Conclusion

2.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIC YEN whose telephone number is (571)272-4249. The examiner can normally be reached on M-F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on 571-272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EY 5/15/09
        /Richemond Dorvil/
        Supervisory Patent Examiner, Art Unit 2626